| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| S1 | 4359 | (signal speech voice data) near (detect detection recognition recognize) and frame and sample and threshold | USPAT | OR | ON | 2003/11/06 10:11 |
| S2 | 386 | (signal speech voice data) near (detect detection recognition recognize) and frame and sample and (threshold same valid) | USPAT | OR | ON | 2003/11/04 10:43 |
| S3 | 167 | (signal speech voice data) near (detect detection recognition recognize) and (frame same sample) and (threshold same valid) | USPAT | OR | ON | 2003/11/04 11:13 |
| S4 | 22 | (signal speech voice data) near (detect detection recognition recognize) and (frame same sample) and (threshold same valid) and "704"/$.ccls. | USPAT | OR | ON | 2003/11/04 11:01 |
| S5 | 6 | 704/233.ccls. and (threshold same (valid validity)) and transform | USPAT | OR | ON | 2003/11/04 11:02 |
| S6 | 129 | (signal speech voice data) near (detect detection recognition recognize) and (frame same sample) and (threshold same valid) and program | USPAT | OR | ON | 2003/11/06 10:14 |
| S7 | 0 | (compostie near signal) and "704"/$.ccls. and (((spectrum spectral) near3 energy) same threshold) | USPAT | OR | ON | 2003/11/06 10:15 |
| S8 | 0 | (compostie near signal) and (((spectrum spectral) near3 energy) same threshold) | USPAT | OR | ON | 2003/11/06 10:15 |
| S9 | 0 | (compostie near3 signal) and (((spectrum spectral) near3 energy) same threshold) | USPAT | OR | ON | 2003/11/06 10:15 |
| S10 | 3542 | ((accumulator ACC) same frame) (((spectrum spectral) near3 energy) same threshold) | USPAT | OR | ON | 2003/11/06 10:16 |
| S11 | 5 | ((accumulator ACC) same frame) and (((spectrum spectral) near3 energy) same threshold) | USPAT | OR | ON | 2003/11/06 10:18 |
| S12 | 10 | ((accumulator ACC) same frame) and ((((spectrum spectral) near3 energy) or pitch) same threshold) | USPAT | OR | ON | 2003/11/06 10:24 |
| S13 | 24 | ((accumulator ACC) same sample) and ((((spectrum spectral) near3 energy) or pitch) same threshold) | USPAT | OR | ON | 2003/11/06 10:32 |

| S14 | 24 | ((accumulator ACC accumulate cumulative adder) near4 (frame sample input data)) and ((((spectrum spectral) near3 energy) or pitch) near3 threshold) | USPAT | OR | ON | 2003/11/06 11:00 |
|---|---|---|---|---|---|---|
| S15 | 1154 | ((detect detection) near3 (speech voice audio) same (noise composite)) | USPAT | OR | ON | 2003/11/06 10:41 |
| S16 | 434 | ((detect detection) near3 (speech voice audio) near6 (noise composite)) | USPAT | OR | ON | 2003/11/06 10:42 |
| S17 | 4 | ((detect detection) near3 (speech voice audio) near6 (noise composite)) and (((spectral spectrum) near3 energy) near7 threshold) | USPAT | OR | ON | 2003/11/06 10:48 |
| S18 | 0 | VAD and (((spectral spectrum) near3 energy) near7 threshold) and ((validation validate) near6 range) | USPAT | OR | ON | 2003/11/06 10:48 |
| S19 | 0 | (((spectral spectrum) near3 energy) near7 threshold) and ((validation validate) near6 range) | USPAT | OR | ON | 2003/11/06 10:49 |
| S20 | 5 | VAD and (((spectral spectrum) near3 energy) near7 threshold) | USPAT | OR | ON | 2003/11/06 10:49 |
| S21 | 5598 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) | USPAT | OR | ON | 2003/11/07 14:24 |
| S22 | 218 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy") with threshold) | USPAT | OR | ON | 2003/11/07 16:09 |

| S23 | 18 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and echo and (overlap with frame) and (computer application program$3) | USPAT | OR | ON | 2003/11/07 14:50 |
|-----|-----|---------------------------------------|-------|-----|-----|------------------|
| S24 | 9 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and echo and (overlapping with frame) and (computer program$3) | USPAT | OR | ON | 2003/11/07 15:48 |
| S25 | 6 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and echo and (overlap$4 with frame) and (computer program$3) and (echo near3 detect$5) | USPAT | OR | ON | 2003/11/07 15:56 |
| S26 | 0 | ("narrow band noise") with (echo near3 detect$5) | USPAT | OR | ON | 2003/11/07 15:56 |
| S27 | 0 | ("narrow band noise") same (echo near3 detect$5) | USPAT | OR | ON | 2003/11/07 15:57 |
| S28 | 40 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and (echo with detection) | USPAT | OR | ON | 2003/11/07 16:09 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S29 | 25 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and (echo with detection) and (computer) | USPAT | OR | ON | 2003/11/07 16:12 |
| S30 | 1 | ((fram$3 bloc$5 sampl$3) near4 ((composite total complete) or ((audio voice video telephony computer speech) with (noise error spurrious echo ghost interlac$4 static glitches)))) and ((transform DCT FFT Fourier) with (product coefficient number data "spectral energy")) and ((echo near3 detection) same noise) | USPAT | OR | ON | 2003/11/07 16:22 |
| S31 | 16 | "echo detection" with noise | USPAT | OR | ON | 2003/11/07 16:32 |
| S32 | 31 | "echo detector" and (speech voice audio) | USPAT | OR | ON | 2003/11/07 16:33 |
| S33 | 169 | noise with (echo near3 (detect$4)) | USPAT | OR | OFF | 2003/11/07 16:45 |
| S34 | 20 | "echo detection" same noise | USPAT | OR | OFF | 2003/11/07 16:48 |
| S35 | 32 | (detect$4 near2 echo) and (noise near2 cancel$4) and speech | USPAT | OR | OFF | 2003/11/07 16:49 |
| S36 | 19 | (echo near3 (detection detect cancel cancellation)) with ("signal to noise ratio" "signal-to-noise ratio" SNR) | USPAT | OR | OFF | 2003/11/10 09:35 |
| S37 | 0 | VAD same ((echo near3 (detect detection)) with delay) | USPAT | OR | OFF | 2003/11/10 09:35 |
| S38 | 2 | VAD and ((echo near3 (detect detection)) with delay) | USPAT | OR | OFF | 2003/11/10 09:36 |
| S39 | 2 | "704"/$.ccls. and ((echo near3 (detect detection)) with delay) | USPAT | OR | OFF | 2003/11/10 09:42 |
| S40 | 19 | (speech voice) and ((echo near3 (detect detection)) with delay) | USPAT | OR | OFF | 2003/11/10 09:42 |
| S41 | 16 | ((number near4 sample) with threshold) and 704/233.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/08 15:20 |
| S42 | 94 | ((number near4 sample) with threshold) and "704"/$.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/08 15:26 |

| S43 | 22 | ((number near4 sample) with threshold) and "704"/$.ccls. and (fourier transform) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/08 15:38 |
|---|---|---|---|---|---|---|
| S44 | 119 | (number with threshold) and 704/233.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/08 15:38 |
| S45 | 44 | (count$4 same (number with threshold)) and 704/233.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 08:47 |
| S46 | 66 | (count$4 with frame) and 704/233.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 09:13 |
| S47 | 26 | (count$4 near5 (paramater feature sample)) and 704/233.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 09:17 |
| S48 | 12 | (count$4 near5 (paramater feature sample)) with threshold and (vad (voice near3 activity near3 detection)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 09:21 |
| S49 | 11 | (number near5 (paramater feature sample)) with threshold and (vad (voice near3 activity near3 detection)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 09:21 |
| S50 | 11 | 704/233.ccls. and vad same (frame with sample) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:46 |
| S51 | 38 | 704/233.ccls. and vad with frame | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:48 |
| S52 | 100 | 704/233.ccls. and ((determin$4 detect$4) near5 speech near5 frame) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:59 |
| S53 | 0 | 704/233.ccls. and ((determin$4 detect$4) near5 speech near5 each near3 frame) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:49 |
| S54 | 0 | ((determin$4 detect$4) near5 speech near5 each near3 frame) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:52 |

| S55 | 13596 | ((determin$4 detect$4) near5 speech witheach near3 frame) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:52 |
|---|---|---|---|---|---|---|
| S56 | 0 | ((determin$4 detect$4) near5 speech with each near3 frame) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 10:52 |
| S57 | 6 | 704/233.ccls. and frame near5 voicing | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 11:01 |
| S58 | 15 | 704/233.ccls. and number near6 ((successive consecutive) near5 (samples features parameters)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 11:56 |
| S59 | 32 | 704/233.ccls. and echo and tone | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 14:35 |
| S60 | 14 | 704/233.ccls. and echo and tone and (overlap$5) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 14:32 |
| S61 | 37 | VAD and echo and tone and (overlap$5) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 14:32 |
| S62 | 14 | 704/233.ccls. and (tone with speech) and (echo with speech) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 14:38 |
| S63 | 1 | 09/828400 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 14:38 |
| S64 | 94 | 704/233.ccls. and (compar$4 with (average mean)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 15:34 |
| S65 | 4 | 704/233.ccls. and (compar$4 with ((spectral spectrum) near3 average)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 15:41 |
| S66 | 0 | 704/233.ccls. and (threshold with ((spectral spectrum) near3 average)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 15:42 |

| S67 | 49 | 704/233.ccls. and (((spectral spectrum) near3 average)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/09 15:42 |
|-----|-----|-----|-----|-----|-----|-----|
| S74 | 175 | (fourier fft) and ((upper higher high) near4 (frequenc$4 envelope)) and (harmonic (frequency near3 multiple)) and (cepstral cepstrum) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2004/11/10 09:36 |
| S75 | 965 | ((spectral spectrum) near5 power near5 (coefficient parameters)) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:03 |
| S76 | 24 | ((spectral spectrum) near5 power near5 (coefficient parameters)) with threshold | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:07 |
| S77 | 125 | ((spectral spectrum) near5 power near5 (coefficient parameters)) and threshold and fft | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:07 |
| S78 | 35 | ((spectral spectrum) near5 power near5 (coefficient parameters)) same fft and threshold | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:12 |
| S79 | 10 | ((spectral spectrum) near5 power near5 (coefficient parameters)) and fft and threshold and (704/233.ccls. 704/208.ccls. 704/210.ccls.) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:16 |
| S80 | 15 | ((spectral spectrum) near5 power) with fft and threshold and (704/233.ccls. 704/208.ccls. 704/210.ccls.) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:20 |
| S81 | 2 | ((spectral spectrum) near5 power) with fft and (power with threshold) and (704/233.ccls. 704/208.ccls. 704/210.ccls.) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 14:05 |
| S82 | 170 | ((spectral spectrum) near5 power) with fft and (power with threshold) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 12:23 |
| S83 | 52 | ((spectral spectrum) near5 power) with fft and (power with threshold) and (speech voice) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 13:12 |
| S84 | 34 | ((spectral spectrum) near5 power) with (fft (fast near3 fourier)) and (power with (limit (water near3 mark))) and (speech voice) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 13:18 |

| S85 | 57 | ((spectral spectrum) near5 power) with (fft (fast near3 fourier)) and (power with (threshold)) and (speech voice) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 13:18 |
| S86 | 2 | ((spectral spectrum) near5 power) with (fast near3 fourier) and (power with threshold) and (704/233.ccls. 704/208.ccls. 704/210.ccls.) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | ON | 2005/04/22 14:05 |